

ABSTRACT OF THE INVENTION

In scalable multi-node multi-process application environments, identical copies of applications are often executing in parallel thus allowing the distribution of load and tolerance of system failure. A problem arises when these applications are security-oriented and involve
5 keying information that changes periodically, such as in the case of public key certificate renewal. When these certificates need renewal, each instance of such applications could attempt to contact the certification authority, potentially causing a conflict since each instance is unaware of the renewal efforts by others. The present invention implements a central process called the
10 Key Repository process, assigning it the function of performing these renewals and other certificate management functions, and inhibiting the application programs from performing these actions. When new certificates are issued, the Key Repository Process makes them available to affected applications when they next request them. Alternately, a signal is sent to each application instance to alert it to the presence of new certificates, allowing these applications to request them as appropriate.